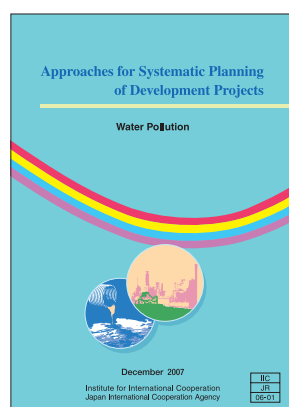




Approaches for Systematic Planning of Development Projects: Water Pollution



(December 2007)

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What are Approaches for Systematic Planning of Development Projects?

A series of reports have been prepared on *Approaches for Systematic Planning of Development Projects* as part of efforts to strengthen both the country-specific approaches and area-specific approaches of JICA. The purpose of these reports is to provide a general picture of each development issue and a basic understanding of effective approaches to addressing each one, so as to better tackle key issues in a given developing country. For this purpose, the reports systematically analyze each development issue. They are put to good use in developing aid projects and formulating cooperation programs. The reports also provide valuable perspectives on development issues for more general purposes. Appendices to the reports focus on JICA's track record in the relevant sectors, international aid trends, and considerations for project formation and implementation. This makes the reports even more practical. Designed to be "at your fingertips," the reports provide a brief summary of the issues as seen from the perspective of development assistance.

What is the Development Objectives Chart?

Each report on *Approaches for Systematic Planning of Development Projects* contains a chart that presents a comprehensive set of development objectives and targets to

address the development issue in a tree form (Development Objectives Chart). The idea is to provide, in an easy-to-understand manner, an overall picture of the issue in the context of developing countries and possible approaches to address it. This is a major feature of this report. The table in the upper half on the reverse side shows an excerpt from the Development Objectives Chart for water pollution. The Chart is organized into a hierarchical structure, comprising goals in water pollution control (*Development Objectives*), *Mid-term Objectives* to achieve the Development Objectives, and *Sub-targets of the Mid-term Objectives* to achieve the Mid-term Objectives. The Chart also provides selected means and methods for achieving the Sub-targets of the Mid-term Objectives. In short, the Development Objectives Chart offers an avenue to an understanding of the objectives and targets of development assistance in water pollution control, as well as the specific activities needed to achieve them.

The Development Objectives Chart is organized from a certain perspective that has been formed in the process of this study. The relationships among the items in the Chart are presented in a linear manner for the sake of simplicity. In reality, however, water pollution problems, including their causes, are entwined, with a wide spectrum of factors involved. Keep in mind that when considering development interventions using the Chart, it may be necessary to explore an optimal portfolio of means and methods for achieving the objectives and targets.

Series of Reports on Approaches for Systematic Planning of Development Projects

Basic Education (2002), Higher Education (2004), Anti-HIV/AIDS Measures (2002), Reproductive Health (2005), Water Resources (2005), Information and Communication Technology (2004), Promotion of Small and Medium Enterprises (2002), Trade and Investment Promotion (2004), Rural Development (2002), Agricultural and Rural Development (2005), Poverty Reduction (2004), Urban and Regional Development (2006), Transportation (2007)

* The figures in parentheses indicate the year of issuance of the related report.

* These reports are available in PDF format from the JICA website: <http://www.jica.go.jp/>

* The report on Air Pollution is planned to be published, and also be downloaded from our website.

Development Objectives Chart for Water Pollution (an excerpt)

Development Objectives	Mid-term Objectives	Sub-targets of the Mid-term Objectives
1. Developing the Capacities of Government, Industry, Civil Society and Academia for Water Conservation and Pollution Control as part of their own Functions	1-1 Improving the Legal and Regulatory Framework	Formulating water management policy; developing an effective legal and regulatory framework; strengthening integrated water management; developing systems for the appropriate enforcement of regulations
	1-2 Improving the Institutional and Human Resources Framework	Raising the awareness of policymakers; clearly defining duties within organizations; improving coordination with other organizations; developing the capacity of the government officials in charge (excluding water quality analysis and monitoring techniques)
	1-3 Improving the Financial Framework	Appropriate financial planning; studying cost recovery options
	1-4 Improving Scientific Knowledge of the Water Environment	Building a framework for and improving the accuracy of water quality monitoring; promoting the accumulation and utilization of water quality data and the disclosure of related information
	1-5 Developing the Environmental Management Capacity of Industry	Building and strengthening corporate environmental management systems; encouraging private participation in environmental management and promoting environmental conservation industries
	1-6 Developing the Water Pollution Control Capacity of Civil Society	Raising public awareness about water environment conservation; developing the environmental management capacity of community-based organizations; strengthening water conservation and pollution control measures that accommodate local and cultural characteristics
	1-7 Developing the Water Pollution Control Capacity of Academia	Strengthening research capacities; providing information to and seeking more engagement with government, industry and civil society
2. Developing the Capacity for Water Conservation and Pollution Control according to the Types of Bodies of Water	2-1 Developing the Capacity for Water Conservation and Pollution Control of Rivers	Designating uses and setting the levels of water quality conservation for rivers; considering options that accommodate the characteristics of river basins and existing water pollution; considering options that accommodate the stage of development of the recipient countries and regions
	2-2 Developing the Capacity for Water Conservation and Pollution Control of Groundwater	Designating uses and setting the levels of water quality conservation for groundwater; considering options that accommodate the characteristics of groundwater basins and water pollution found there; considering options that accommodate the stage of development of the recipient countries and regions
	2-3 Developing the Capacity for Water Conservation and Pollution Control of Lakes	Designating uses and setting the levels of water quality conservation for lakes; assessing the hydrological characteristics of lakes; considering options that accommodate the characteristics of lake basins and existing water pollution found there; considering options that accommodate the stage of development of the recipient countries and regions
	2-4 Developing the Capacity for Water Conservation and Pollution Control of Enclosed Coastal Seas	Designating uses and setting the levels of water quality conservation for enclosed coastal seas; assessing the hydrographic characteristics of enclosed coastal seas; considering options that accommodate the characteristics of basins and existing water pollution; considering options that accommodate the stage of development of the recipient countries and regions

Source: The main report.

Development Objectives Chart (Water Pollution)

To consider approaches to water pollution control, this report has established two development objectives: (i) strengthen the capacity of stakeholders for water conservation and pollution control; and (ii) improve the capacity for water conservation and pollution control according to the type of public bodies of water.

The idea behind Development Objective 1 is that in order to improve the capacity of a society as a whole to undertake water quality management, it is essential to evaluate the roles of and interrelationships between different stakeholders in that society and develop their capacities accordingly. The idea behind Development Objective 2 is that each public body of water has its own characteristics and requires approaches that are tailored to these for effective problem-solving.

The intention here is to take a more holistic approach to water pollution by analyzing and addressing two different aspects of this development issue. To assess the relevancy and identify the components of a project for improving the water quality of a given body of water, the following steps will be taken: (i) examine specific options for the type of that water body under Development Objective 2 and select the appropriate options; and (ii) study how to support the capacity development or assistance required to put the options into practice based on the menu under Development Objective 1. Chapter 2 of this report discusses effective approaches to water pollution using the chart items that have been set based on this concept.

Towards More Effective Development Assistance in Water Pollution Control

The report has identified four guiding principles of JICA's cooperation in water pollution reduction: (i) target-setting and phasing-in of JICA's cooperation in line with the stage of development and priority needs of the recipient countries; (ii) building the capacities of the key actors to develop the pollution control capacity of the society as a whole; (iii) consideration of the optimal portfolio of development interventions based on capacity assessment; and (iv) strengthening water environment administration and water quality management capacity based on environmental science and technology. Based on these principles, the report has identified the following priorities to make JICA's assistance more effective and efficient for the future:

- Support for strengthening the capacity for formulating water sector policy and environmental management programs
- Organization and institution building and capacity development assistance for water environment management
- Upgrading the levels of environmental science and technology in the area of the water environment
- Timely implementation of priority measures for water pollution control
- Partnership with other donors for synergies
- Use of the program approach, which involves a range of aid modalities